

Abstract of the Disclosure

The invention provides methods for improving plant agronomic traits by altering the expression or activity of plant G-protein alpha and beta subunits that are *GPA1* or *AGB1* orthologs. The invention also provides  
5 such transgenic plants with improved agronomic traits. One embodiment of the invention includes methods for modulating the expression or activity of a plant G-protein beta subunit that is an *AGB1* ortholog to alter one or more of the following: the time to reach and duration of flowering, fruit yield, root biomass, seed size, seed shape, plant size, and the number of stem  
10 branches. The present invention also encompasses methods for modulating the expression or activity of a plant G-protein alpha subunit that is a *GPA1* ortholog to alter one or more of the following: the duration of flowering, fruit and seed yield, plant size, seed size, and seed shape. The compositions of the invention include transgenic plants, and seed thereof, particularly  
15 transgenic plants that are dicots, members of the genus *Brassica*, trees, or gymnosperms.